Eradication and Management

Management efforts address invasive species already established in many areas of the country, with the goal of reducing impacts. Eradication of an invasive species means eliminating the species entirely from a given area, and is the ideal goal of management, though this is seldom feasible if the species is already well-established. Nonetheless, management of invasive species already widespread remains important in order to protect areas and critical resources not yet impacted. Management efforts should employ an Integrated Pest Management (IPM) approach, in which factors such as effectiveness, cost, and safety are explicitly weighed in a transparent analysis.

1. Expand biological control efforts, when appropriate.
For invasive species that are already widespread, biological controls may be the best and most economical long-term strategy for management. To be effective, biological control efforts must involve a collaborative effort among federal, state, and local agencies, as well as university researchers. It is recommended that biological control efforts be increased among involved state and local agencies for targeted invasive species, and that cooperation and integration with the United States Department of Agriculture biological control programs be strengthened.

2. Increase the number of field biologists working on invasive species.
The ranks of state agency biologists working on invasive species have been reduced significantly, thus weakening the state's ability to manage invasive species. County Departments of Agriculture often lead local efforts to implement and coordinate many management programs. Their work needs regional support from state biologists, who provide coordination and linkage to state labs.

3. Support the state's network of Weed Management Areas or Associations and other regional collaborations.
All invasive species management happens in a given place, and local involvement is essential to successful management. In the last decade the formation of Weed Management Areas or Associations (WMAs) has brought agencies together with important partners to prioritize, coordinate and implement local invasive plant management projects. This is a cost-effective strategy, well-adapted to local conditions, and merits ongoing financial support. Other models for regional partnership can also add value and provide for sustained efforts. Such efforts should be supported.

4. Develop more effective management tools and restoration techniques.
Existing management tools and techniques can be improved with respect to long-term effectiveness. It is recommended that the state invest in the development and implementation of new science-based invasive species management tools as well as techniques for restoring high value ecosystems to meet desired habitat conditions. Improved tools and techniques can be developed through an active partnership between researchers and practitioners, as well as funding and permitting agencies. This partnership is also important for rapid transfer of new technologies to the field.

5. Establish standardized mapping and reporting protocol.
Mapping invasive species is fundamentally important for guiding management efforts and enabling long-term monitoring. Standard basic mapping protocols should be established, central aggregation structures put in place, and resources dedicated to increasing the quantity and quality of spatial data on invasive species. All projects should be required to generate appropriate maps and project reports. Project reports should also be aggregated in an accessible database, such as the Natural Resources Project Inventory. These programs should be designed to mesh with multistate and national invasive species mapping activities.

6. Strengthen federal and state invasive plant listing process and rating systems.
Federal government and most states should examine the potential benefits of the transparent "weed board" approach used by many other states to integrate university and stakeholder expertise. Existing rating systems should be modified to officially recognize invasive plants whose harmful impacts are primarily environmental. Many projects across the state work to address these plants, including projects funded by the state, and some future federal funding can only be utilized for formally recognized species. In addition to listing species, such a board can play a critical role in evaluating invasive plant program effectiveness and assisting with strategic guidance.

7. Minimize invasive plant spread along roadsides and utility corridors.
Disturbed ground along roads and utility rights-of-way serves as a primary vector for spreading invasive plants into new areas. Maintenance activities can inadvertently facilitate this spread. Projects should include management of invasive populations along these major pathways and corridors to prevent further spread, with updated information on effective methods regularly provided to maintenance personnel.

8. Develop and implement prioritization models for managing invasive species.
With limited resources, prioritization of management efforts is a necessary part of addressing invasive species issues throughout the country. Risk assessment approaches in conjunction with improved data on current distribution can provide the basis for prioritization analysis that helps determine the most cost-effective and efficient strategy for managing invasive species populations at a county, regional, and statewide level.

9. Develop training programs on using Integrated Pest Management (IPM) principles and Best Management Practices (BMPs).
Developing an IPM program involves evaluating and integrating compatible management tactics for effective control at a specific location. State supported training and continuing education opportunities are needed to certify federal, state, county, or private organizations or individuals who are involved in early detection, eradication and management actions for different types of invasive species. In addition, the principles of IPM should be a central theme in all educational outreach programs to clearly communicate the state's management approach.

10. Increase on-the-ground workforce and job training for invasive species management.

On-the-ground invasive species management provides significant potential for job creation. Existing organizations such as the Conservation Corps and local conservation groups contribute to the workforce addressing invasive species, and offer excellent opportunities for job training. This workforce and job training should be increased.